

CLAIMS

What is claimed is:

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1. A seal for a driveshaft, wherein said driveshaft comprises first and second members each having splined portions, said second member being telescopically resident within said first member, said splined portion of said first member cooperating with said splined portion of said second member thereby allowing said first and second members to cooperatively form the driveshaft, said seal comprising:

a first splined inner-portion having a first diameter; and

a second splined inner-portion having a second diameter, wherein said first diameter of said first splined inner-portion of said seal is larger than said second diameter of said second splined inner-portion of said seal, at least a part of the splined portion of said first member is resident within said first splined inner-portion of said seal, and at least a part of the splined portion of said second member is telescopically resident within said second splined inner-portion of said seal.

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2. The invention of claim 1 wherein said seal is one-piece.

3. The invention of claim 1 wherein said seal is plastic.

4. The invention of claim 1 wherein said seal is flexible.

5. The invention of claim 1 wherein each of said first and second members have respective diameters of approximately a same respective value, and each of said first and second members respective splined portions have a respective

length of about three times said value of said respective diameter of said first member.

6. The invention of claim 1 wherein said first and second splined inner-portions of said seal are fit around at least a part of the respective splined portions of said first and second members utilizing initial preload force.

7. The invention of claim 1 further comprising a spring within at least one of said first and second splined inner-portions of said seal providing preload force towards at least one of the respective splined portions of said first and second members.

8. The invention of claim 7 wherein said spring is molded within at least one of said first and second splined inner-portions of said seal.

9. The invention of claim 7 wherein said spring is a garter-ring.

10. The invention of claim 1 wherein one of said first and second splined inner-portions of said seal is secured to one of said respective splined portions of said first and second members of said driveshaft utilizing a clamp.

11. The invention of claim 10 wherein said clamp is secured around one of said first and second splined inner-portions of said seal providing force towards one of said respective splined portions of said first and second members of said driveshaft.

12. The invention of claim 1 wherein said first splined inner-portion of said seal is air-tightly fit around at least a part of the splined portion of said first member, and the second splined inner-portion of said seal is air-tightly fit around at least a part of the splined portion of said second member.

13. The invention of claim 1 wherein said first splined inner-portion of said seal is secured to an end of the splined portion of said first member, and said splined portion of said second member is telescopically resident within said second splined inner-portion of said seal.

Sub B1 > 14. The invention of claim 1 wherein said first and second members of said driveshaft and said first and second splined inner-portions of said seal are generally cylindrical.

15. A seal for a double-tube splined driveshaft, said seal comprising:
a first splined inner-portion having a first diameter; and
a second splined inner-portion having a second diameter, wherein said first diameter of said first splined inner-portion of said seal is larger than said second diameter of said second splined inner-portion of said seal, and said first and second splined inner-portions of said seal are each adapted to be fitted around at least a part of splined portions of separate respective tubes of a double-tube telescopically resident splined driveshaft.

Sub C2 > 16. The invention of claim 15 wherein said seal is one-piece.

17. The invention of claim 15 wherein said seal is plastic.

18. The invention of claim 15 wherein said seal is flexible.

19. The invention of claim 15 further comprising a spring within at least one of said first and second splined inner-portions of said seal.

20. The invention of claim 15 further comprising a clamp secured around one of said first and second splined inner-portions of said seal.

21. The invention of claim 15 wherein said first and second splined inner-
portions of said seal are generally cylindrical.

22. A method of attaching a seal to a driveshaft comprising:

providing a driveshaft comprising first and second members each having
splined portions, said second member being telescopically resident within said
first member, said splined portion of said first member cooperating with said
splined portion of said second member thereby allowing said first and second
members to cooperatively form the driveshaft;

providing a seal comprising a first splined-inner portion having a first
diameter, and a second splined-inner portion having a second diameter, wherein
said first diameter of said first splined inner-portion is larger than said second
diameter of said second splined inner-portion;

fitting the first splined inner-portion of said seal around at least a part of
the splined portion of said first member; and

fitting the second splined inner-portion of said seal around at least a part
of the splined portion of said second member.

23. The invention of claim 22 wherein said first and second splined inner-
portions of said seal are fit to said respective splined portions of said first and
second members of said driveshaft utilizing initial preload force.

24. The invention of claim 22 further comprising a spring within at least one of
said first and second splined inner-portions of said seal, said spring providing
preload force against at least one of said respective splined portions of said first
and second members of said driveshaft.

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25. The invention of claim 22 further comprising a clamp, wherein at least one of said first and second splined inner-portions of said seal is fitted to at least one of said splined portions of said respective first and second members of said driveshaft with the clamp.

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